NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Algal Conditions in New Jersey Estuarine and Coastal Waters
Week of August 10, 2009

TO: Distribution

FROM: Bill Heddendorf, Senior Environmental Specialist
Bureau of Marine Water Monitoring

DATE: August 13, 2009

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters
Week of August 10, 2009

Samples were collected by the USEPA helicopter and analyzed at the NJDEP Bureau of Marine Water Monitoring's Leeds Point Laboratory.

Raritan/Sandy Hook Bay Area

The waters of Raritan Bay are experiencing low concentration of *Cyclotella sp* (840 cells/mL). No toxic species were detected.

The waters of Sandy Hook Bay are experiencing a bloom of mixed diatoms dominated by *Cyclotella sp* (1600 cells/mL) and *Skeletonema costatum* (1040 cells/mL). No toxic species were detected.

New Jersey Coastal Area

The ocean waters from Long Branch to Manasquan are experiencing low concentrations of mixed dinoflagellates and diatoms. Cell counts ranged from 840 to 1120 cells/mL. The ocean waters from Ship Bottom to Cape May are generally clear with sparse algal concentrations. No toxic species were detected.

Barnegat Bay Area

The waters of Barnegat Bay from Toms River to Barnegat Inlet are experiencing a bloom of *Nannochloris oculata.* The waters from Manahawkin Bay to Little Egg Harbor are generally clear with sparse algal concentrations. No toxic species detected were detected.

Great Bay

The waters of Great Bay are experiencing low concentrations of *Thalassiosira minima* (520 cells/mL). No toxic species were detected.

Great Egg Harbor

The waters of Great Egg Harbor are generally clear with sparse algal concentrations. No toxic species were detected.

Delaware Bay/Capeshore Area

The waters along the Cape Shore near Dias Creek are experiencing low concentrations of a diverse assemblage of phytoplankton with a significant amount of detritus. The waters near the mouth of Delaware Bay are experiencing sparse algal concentrations with a significant amount of detritus. No toxic species were detected.

No samples collected in the New Jersey Coastal Waters were found to contain the Paralytic Shellfish Poisoning species *Alexandrium spp.

NJDEP Water Monitoring and Standards
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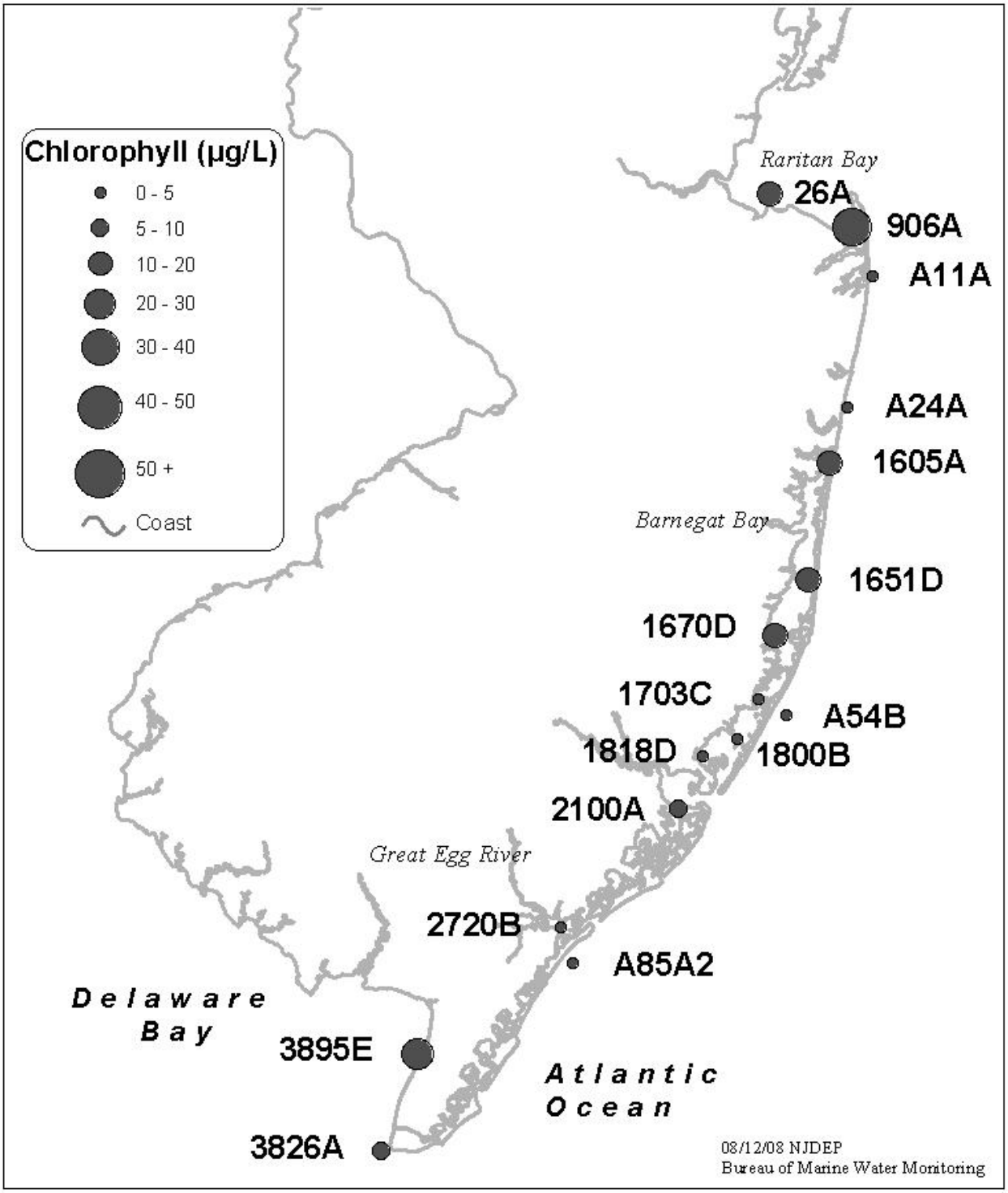
Phytoplankton Data Sheet

Date: 08/12/2009

Collector: EPA

Station #	Time	Water Temp.	Chlorophyll (ug/l)	Dominant Species	Toxic Species*
26A	0834	23.0	11.35	*Cyclotella sp* (840 cells/mL)	None present
906A	0842	24.9	38.26	*Cyclotella sp* (1600 cells/mL) *Skeletonema costatum* (1040 cells/mL)	None present
A11A	0847	24.2	2.94	Diverse assemblage of phytoplankton	None present
A24A	0856	24.1	4.20	Diverse assemblage of phytoplankton	None present
1605A	0902	25.5	11.77	*Nannochloris oculata*	None present
1651D	0927	26.4	17.66	*Nannochloris oculata*	None present
1670D	0933	25.8	14.72	*Nannochloris oculata*	None present
1703C	0938	26.3	4.20	Sparse algal concentrations	None present
A54B	0941	24.3	3.36	Sparse algal concentrations	None present
1800B	0946	26.4	4.20	Sparse algal concentrations	None present
1818D	0949	26.0	4.63	Sparse algal concentrations	None present
2100A	0954	26.1	5.89	*Thalassiosira minima* (520 cells/mL)	None present
2720B	1006	25.8	3.78	Sparse algal concentrations	None present
A85A2	1010	23.7	4.63	Sparse algal concentrations	None present
3826A	1032	23.4	5.89	Sparse algal concentrations Significant amount of detritus	None present
3895E	1040	26.4	28.17	Diverse assemblage of phytoplankton Significant amount of detritus	None present

- **Toxic Species = toxic species associated with shellfish safety including; *Prorocentrum* lima., *Alexandrium* spp., *Dinophysis* spp., and *Pseudonitzschia* spp.**
- **The Bureau has implemented an aircraft remote sensing program for estimating chlorophyll levels in NJ's coastal waters. This program provides a valuable perspective on algal conditions and trends. To view these maps please visit the website. http://www.nj.gov/dep/bmw/remotesensing.htm**


Chlorophyll (µg/L)
0 - 5
5 - 10
10 - 20
20 - 30
30 - 40
40 - 50
50 +
Coast
Raritan Bay
26A
906A
A11A
A24A
1605A
Barnegat Bay
1651D
1670D
1703C
A54B
1818D
1800B
2100A
Great Egg River
2720B
A85A2
Delaware Bay
3895E
Atlantic Ocean
3826A
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